



02-28-06 AF/IFW #

PTO/SB/21 (04-04)

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		Application Number	10/734,979
		Filing Date	12/10/2003
		First Named Inventor	Campbell et al.
		Art Unit	1762
		Examiner Name	Turocy
Total Number of Pages in This Submission		Attorney Docket Number	0906S-000339 (IN-5567)

### ENCLOSURES (check all that apply)

<input checked="" type="checkbox"/> Fee Transmittal Form	<input type="checkbox"/> Drawing(s)	<input type="checkbox"/> After Allowance Communication to Technology Center (TC)
<input type="checkbox"/> Fee Attached	<input type="checkbox"/> Licensing-related Papers	<input type="checkbox"/> Appeal Communication to Board of Appeals and Interferences
<input type="checkbox"/> Amendment / Reply	<input type="checkbox"/> Petition	<input type="checkbox"/> Appeal Communication to TC (Appeal Notice, Brief, Reply Brief)
<input type="checkbox"/> After Final	<input type="checkbox"/> Petition to Convert to a Provisional Application	<input type="checkbox"/> Proprietary Information
<input type="checkbox"/> Affidavits/declaration(s)	<input type="checkbox"/> Power of Attorney, Revocation Change of Correspondence Address	<input type="checkbox"/> Status Letter
<input type="checkbox"/> Extension of Time Request	<input type="checkbox"/> Terminal Disclaimer	<input checked="" type="checkbox"/> Other Enclosure(s) (please identify below):
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<input type="checkbox"/> Certified Copy of Priority Document(s)		
<input type="checkbox"/> Response to Missing Parts/ Incomplete Application		
<input type="checkbox"/> Response to Missing Parts under 37 CFR 1.52 or 1.53		

#### Remarks

The Commissioner is hereby authorized to charge any additional fees that may be required under 37 CFR 1.16 or 1.17 to Deposit Account No. 23-3425. A duplicate copy of this sheet is enclosed.

The PTO did not receive the following listed item(s) Pg. 12 v/13

### SIGNATURE OF APPLICANT, ATTORNEY, OR AGENT

Firm or Individual name	Harness, Dickey & Pierce, P.L.C.	Attorney Name Anna M. Budde	Reg. No. 35,085
Signature	<i>Anna M Budde</i>		
Date	February 27, 2006		

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This collection of information is required by 37 CFR 1.5. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to 12 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

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# FEE TRANSMITTAL for FY 2006

Effective 2/8/2006. Patent fees are subject to annual revision.

 Applicant claims small entity status. See 37 CFR 1.27

TOTAL AMOUNT OF PAYMENT (\$ 500)

Complete if Known

Application Number	10/734,979
Filing Date	12/10/2003
First Named Inventor	Campbell et al.
Examiner Name	1762
Art Unit	Turocy
Attorney Docket No.	0906S-000339 (IN-5567)

## METHOD OF PAYMENT (check all that apply)

 Check  Credit card  Money  Other  None  
 Order
  Deposit Account:

Deposit Account Number

23-3425

Deposit Account Name

BASF Corporation

## The Director is authorized to: (check all that apply)

- 
- Charge fee(s) indicated below
- 
- Credit any overpayments
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- 
- Charge any additional fee(s) during the pendency of this application
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- 
- Charge fee(s) indicated below, except for the filing fee to the above-identified deposit account.

## FEE CALCULATION (continued)

## 3. ADDITIONAL FEES

Large Entity Small Entity

Fee Code	Fee (\$)	Fee Code	Fee (\$)	Fee Description	Fee Paid
1051	130	2051	65	Surcharge - late filing fee or oath	
1052	50	2052	25	Surcharge - late provisional filing fee or cover sheet	
1053	130	1053	130	Non-English specification	
1812	2,520	1812	2,520	For filing a request for reexamination	
1804	920*	1804	920*	Requesting publication of SIR prior to Examiner action	
1805	1,840*	1805	1,840*	Requesting publication of SIR after Examiner action	
1251	120	2251	60	Extension for reply within first month	
1252	450	2252	225	Extension for reply within second month	
1253	1020	2253	510	Extension for reply within third month	
1254	1,590	2254	795	Extension for reply within fourth month	
1255	2,160	2255	1080	Extension for reply within fifth month	
1401	500	2401	250	Notice of Appeal	500
1402	500	2402	250	Filing a brief in support of an appeal	
1403	1000	2403	500	Request for oral hearing	
1452	500	2452	250	Petition to revive – unavoidable	
1453	1500	2453	750	Petition to revive – unintentional	
1462	400	1462	400	Petition fee under 37 CFR 1.17(f)	
1463	200	1463	200	Petition fee under 37 CFR 1.17(g)	
1464	130	1464	130	Petition fee under 37 CFR 1.17(h)	
1807	50	1807	50	Processing fee under 37 CFR 1.17 (q)	
1806	180	1806	180	Submission of Information Disclosure Stmt	
8021	40	8021	40	Recording each patent assignment per property (times number of properties)	
1809	790	2809	395	Filing a submission after final rejection (37 CFR § 1.129(a))	
1810	790	2810	395	For each additional invention to be examined (37 CFR § 1.129(b))	
1801	790	2801	395	Request for Continued Examination (RCE)	
Other fee (specify) _____					
*Reduced by Basic Filing Fee Paid					SUBTOTAL (3) (\$500)
4. SEARCH/EXAMINATION FEES					
1111	500	2111	250	Utility Search Fee	
1112	100	2112	50	Design Search Fee	
1113	300	2113	150	Plant Search Fee	
1114	500	2114	250	Reissue Search Fee	
1311	200	2311	100	Utility Examination Fee	
1312	130	2312	65	Design Examination Fee	
1313	160	2313	80	Plant Examination Fee	
1314	600	2314	300	Reissue Examination Fee	
SUBTOTAL (4) (\$0)					

\*\*or number previously paid, if greater; For Reissues, see above

## SUBMITTED BY

Complete (if applicable)

Name (Print/Type)	Anna M. Budde	Registration No. (Attorney/Agent)	35,085	Telephone	(248) 641-1600
Signature	<i>Anna M. Budde</i>			Date	February 27, 2006

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PATENT

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Application No.: 10/734,979

Filing Date: December 10, 2003

Applicant: Donald H. Campbell and David R. Hay

Group Art Unit: 1762

Examiner: David F. Turocy

Title: BLOCKED ISOCYANATES FOR CLEARCOATS  
WITHOUT USAGE RESTRICTIONS

Attorney Docket: IN-5567  
Harness, Dickey & Pierce Docket No. 906-339

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Director of the United States Patent and Trademark Office  
P.O. Box 1450  
Alexandria, VA 22313-1450

**Appeal Brief Under 37 C.F.R. § 41.37**

Sir:

This is an appeal from the Office Action mailed September 30, 2005,  
finally rejecting all pending claims. A Notice of Appeal was mailed on December 27,  
2005 appealing all of the rejected claims. This Appeal Brief is due on February 27, 2005.

This Brief is accompanied by the fee under 37 C.F.R. § 41.20(b)(2).

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**Real Party in Interest**

The real party in interest is BASF Corporation, a corporation of the state of Delaware, to which the inventors assigned all rights in this invention. The assignment was recorded by the USPTO on March 26 at reel 014465, frame 0973.

**Related Appeals and Interferences**

There are no related appeals or interferences.

**Status of Claims**

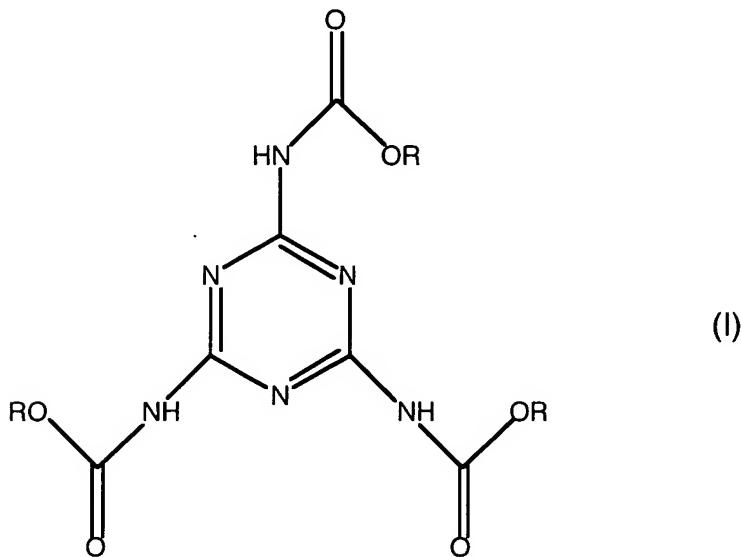
All of the pending claims, claims 1-14, stand finally rejected. This appeal is taken as to all of the pending claims.

**Status of Amendments**

The amendment filed after the final rejection was entered.

### **Summary of Claimed Subject Matter**

Independent claim 1 is to a method of coating a substrate to maximize capture from wastewater of a compound of Formula I, wherein each R is independently selected from the group consisting of alkyl, cycloalkyl, aryl, and alkylaryl groups and wherein the R groups have, on average, five or more carbon atoms, with the proviso that the compound is a solid when the R groups have, on average, fewer than six carbon atoms. Page 3, paragraphs [0006] and [0007].



A thermoset composition comprises a compound of Formula I, an oligomer thereof, or both is sprayed onto a substrate in a spray booth. Page 3, lines 1-2 (paragraph [0005]). Overspray of the thermoset composition results from the spraying and is captured with a spray booth water wash. The spray booth water wash is removed and the compound or oligomer of Formula I is removed from the water wash so that the overspray waste can be safely discharged to sewers. Page 3, lines 2-4 (paragraph [0005]), page 4, lines 2-4 (end of paragraph [0008]), page 14, paragraph [0032]. pages 14-16, Example 2, paragraphs [0033]-[0034].

While blocked isocyanate crosslinkers based on melamine triisocyanate are disclosed in Jacobs III, et al., the EPA has restricted the only such compound commercially available, the

methanol/butanol-blocked compound, because of its unacceptable aquatic toxicity, especially toward fish. Page 1, lines 1-7 of paragraph [0003]. Thus, it could not be used in automotive coatings, which are applied by spraying, because the overspray is trapped in spray booth washwater, which could then not be safely disposed of. Page 1, lines 7-11 of paragraph [0003].

The present invention overcomes this problem. Example 2 explains the results of toxicity modeling for the blocked isocyanate of Applicants' invention.

Claim 4 is separately patentable. In claim 4, at least one R comprises an oxygen atom. Page 2, second line from bottom (paragraph [0005]). For example, the R comprises an oxygen when the isocyanate group is blocked with an alkylene glycol monoalkyl ether (the ether oxygen then being part of the R group), Page 6, line 7 (in paragraph [0011]); Example 3 on pages 16-17.

#### **Grounds of Rejection to Be Reviewed on Appeal**

Claims 1-14 stand rejected under 35 U.S.C. § 103(a) as unpatentable over Sadvary et al., U.S. Patent Application Publication 2001/0039324 A1, which incorporates Jacobs III et al., U.S. Patent 4,939,213 by reference.

## Argument

**Claims 1-14 are patentable over Sadvary et al., U.S. Patent Application Publication 2001/0039324 A1.**

The Sadvary publication does not suggest Applicants' invention because Applicants' invention provides an unexpected advantage over the expansive group of curing agents from which the Sadvary publication asks the skilled artisan to select. A subgroup possessing a different feature or property may be patentable over a reference disclosing a broad genus that includes the subgroup to which the claims are directed when that reference does not disclose or suggest the selection of the claimed subgroup. *In re Deuel*, 34 U.S.P.Q.2d 1210 (Fed. Cir. 1995) ("a broad genus does not necessarily render obvious each compound within its scope"); *In re Bell*, 26 U.S.P.Q.2d 1529 (Fed. Cir. 1993) (claim to DNA and RNA molecules with certain human genes patentable over disclosure of amino acid sequences); *In re Jones*, 21 U.S.P.Q.2d 1941 (Fed. Cir. 1992) (particular dicamba salt patentable over disclosure of genus of dicamba salts). Compare, *In re Susi*, 169 U.S.P.Q. 123 (C.C.P.A. 1971) (claimed stabilizer obvious from disclosure of genus of compounds, all useful as stabilizers, in combination with disclosure of specific stabilizer with nearly identical structure); *Merck & Co. Inc. v. Biocraft Laboratories Inc.*, 10 U.S.P.Q.2d 1843 (Fed. Cir. 1989) (all compounds disclosed in the reference had the same efficacy as the claimed combination, thus there was a reasonable likelihood of success in choosing any compound).

In the present instance, as in *Deuel* and *Bell*, there can be no expectation of success in random selection among the Jacobs curing agents. The Sadvary publication provides no direction at all on how to select those curing agents that will be acceptable in the present method from those that will not be useful because of toxicity to aquatic life. There is no appreciation of the problems of aquatic toxicity in the Sadvary publication (or the Jacobs patent) or any awareness

that not all of the curing agents within its general description will avoid this regulatory concern. Without this, there can be no reasonable expectation of success. There is, in fact, no motivation in the reference to carry out the claimed method.

As further evidence that Applicants' invention is patentable over the prior art, Applicants point out that the commercially available triisocyanto triazine (Jacobs III compound) did not have the property and advantage of Applicants' invention and, therefore, could not be used in compositions made for spray application.

Thus, with regard to all claims, the prior art did not provide the motivation or teaching needed for the person of ordinary skill in the art to arrive at the present invention.

Finally, with regard to claim 4, the Formula I compound prepared using an alcohol would not have an R group comprising an oxygen. The oxygen atom of an alcohol is the one shown as the linking oxygen atom, the "O" of the "OR." Thus claim 4 is patentable over the cited art for the additional reason that there is no suggestion to use a compound of Formula I in which the R group includes an oxygen atom.

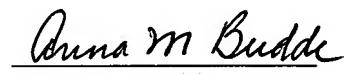
Because the Sadvary publication does not suggest the subgroup of Applicants' invention, and because the Sadvary publication provides no reasonable expectation of success in solving the problem Applicants faced, Applicants submit that the rejection should be REVERSED.

Further in regard to claim 4, because the Sadvary publication is silent on compounds of Formula I in which an R group comprises an oxygen atom, Applicants submit that the rejection should be reversed in regard to claim 4 for this additional reason.

### Conclusion

The present claims are patentable over the cited art. Applicants, therefore, respectfully petition this Honorable Board to reverse the final rejection of the claims on each ground and to indicate that all claims are allowable.

Respectfully submitted,

  
Anna M. Budde  
Anna M. Budde  
Registration No. 35,085

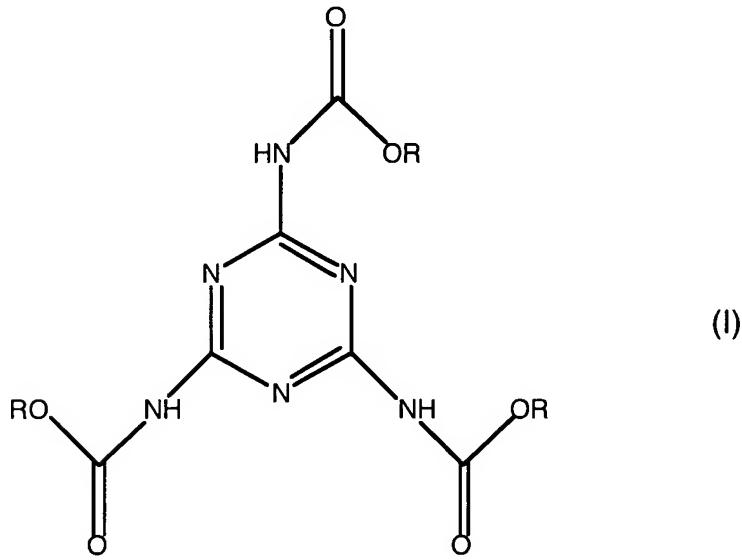
February 27, 2006  
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Claim Appendix

*Copy of the ClaimsAppealed*

1. A method of coating a substrate to maximize capture of a compound of Formula I from wastewater, comprising steps of:

- (a) providing a thermosetting composition comprising a compound of Formula I



an oligomer thereof, or both, wherein each R is independently selected from the group consisting of alkyl, cycloalkyl, aryl, and alkylaryl groups and wherein the R groups have, on average, five or more carbon atoms, with the proviso that the compound is a solid when the R groups have, on average, fewer than six carbon atoms;

(b) spraying the thermosetting composition onto the substrate in a spray booth where overspray of the composition containing the compound of Formula I or the oligomer thereof or both results from the spraying,

- (c) capturing the overspray with a spray booth water wash,  
(d) removing spray booth water wash as waster water and

(e) removing the compound of Formula I or the oligomer thereof or both from the waste water.

2. The method of claim 1, wherein each R has six to eighteen carbon atoms.

3. The method of claim 1, wherein each R has six to eight carbon atoms,

4. The method of claim 1, wherein at least one R comprises an oxygen atom.

5. The method of claim 1, wherein the thermosetting composition comprises an oligomer of compound (I).

6. The method of claim 5, wherein the oligomer is an isocyanurate.

7. The method of claim 1, wherein each R is independently selected from the group consisting of hexyl, 2-ethylhexyl, heptyl, and octyl groups.

8. The method of claim 1, wherein the thermosetting composition is a clearcoat coating composition.

9. The method of claim 1, wherein the thermosetting composition further comprises an isocyanate-reactive material.
10. The method of claim 1, wherein the thermosetting composition further comprises an hydroxyl-functional material.
11. The method of claim 10, wherein the hydroxyl-functional material is selected from the group consisting of acrylic polymers, polyurethane polymers and oligomers, polyester polymers and oligomers, and combinations thereof.
12. The method of claim 10, wherein the thermosetting composition further comprises at least one additional crosslinker selected from the group consisting of aminoplast resins and blocked isocyanate resin crosslinkers other than compound (i) and other than oligomers of compound (i).
13. The method of claim 10, wherein the compound (I), oligomer thereof, or both is from about 2% to about 40% by weight of the nonvolatile vehicle of the thermosetting composition.
14. The method of claim 1, wherein the substrate is an automotive vehicle or part thereof.

## EVIDENCE APPENDIX

None.

RELATED PROCEEDINGS APPENDIX

None.